

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of making bone particles which comprises: a) at least partially immersing a quantity of bone in an immobilization medium; b) effecting a phase change of the immobilization medium to convert the immobilization medium to a solid state, thereby solidifying the immobilization medium to provide a solidified mass of bone and immobilization medium; c) subdividing the solidified mass of bone and immobilization medium to provide subdivided particles of bone; and d) separating the bone particles from the immobilization medium.
2. (Original) The method of claim 1, wherein the subdivided bone particles are in association with immobilization medium.
3. (Cancelled)
4. (Original) The method of claim 1 wherein the immobilization medium is sufficiently rigid to anchor itself and the bone contained therein against the forces applied during a milling operation.
5. (Previously Presented) The method of claim 1 wherein the immobilization medium is selected from the group consisting of water, water based acid solutions, water based basic solutions, water based salt solutions, water based polymer solutions, organic liquids, carbon dioxide, solutions of polymers, materials that are liquid below about 80 °C. and can be solidified by cooling, materials that solidify through chemical action, materials that solidify upon removal

of a solvent, and materials that crystallize to form solids.

6. (Original) The method of claim 1 wherein the immobilization medium is selected from the group consisting of glycerol, propylene glycol, polyethylene glycol, ethanol, hydrochloric acid, peracetic acid, polystyrene, and polyvinyl chloride.

7. (Original) The method of claim 1 wherein the immobilization medium is a composition which sublimates.

8. (Withdrawn) Bone particles produced in accordance with the methods of claim 1.

9. (Withdrawn) The bone particles of claim 8 wherein the size of the particles ranges from about 150 microns to about 14 cm.

10. (Original) The method of claim 1 wherein the starting bone material comprises more than one whole bone, a whole bone, and any fragments thereof.

11. (Withdrawn) The particles of claim 8 wherein the ratio of bone to immobilization medium is from about 1:100 to about 10:1.

12. (Withdrawn) The bone particles of claim 8 wherein the particles are fibers with varied orientations relative to the collagen fibrils of the donor bone.

13. (Withdrawn) An implant made of bone particles produced in accordance with the methods of claim 1.

14. (Withdrawn) An implant made of bone particles produced in accordance with the methods of claim 2.
15. (Withdrawn) A composition comprising one or more bone fragments in combination with an immobilization medium.
16. (Withdrawn) The composition of claim 15 wherein the immobilization medium is sufficiently rigid to anchor itself and the bone contained therein against the forces applied during a milling operation.
17. (Withdrawn) The composition of claim 15 wherein the immobilization medium is selected from the group consisting of water, water based acid solutions, water based basic solutions, water based salt solutions, water based polymer solutions, organic liquids, solutions of polymers, materials that are liquid below about 80 °C. and can be solidified by cooling, materials that solidify through chemical action, materials that solidify upon removal of a solvent, and materials that crystallize to form solids.
18. (Withdrawn) An apparatus for forming a solidified mass of bone and immobilization medium for subsequent subdivision into particles, which comprises: a) a base; b) a base frame attached to the surface of the base; and, c) a detachable former member enclosing the base frame.
19. (Withdrawn) A workpiece holder which comprises: a) a base; and, b) a base frame attached to the surface of the base.
20. (Withdrawn) The workpiece holder of claim 19 wherein the base possesses a passageway for the circulation of refrigerant therethrough.
21. (Withdrawn) The workpiece holder of claim 19 wherein the refrigerant is selected from the group consisting of water, aqueous solutions, water/organic mixtures, water/alcohol mixtures,

organic liquids, fluorocarbon refrigerants, chloro-fluorocarbon refrigerants, ammonia, propylene glycol/water solutions, ethylene glycol/water solutions, brine solutions, alcohol solutions, liquefied gasses, liquid nitrogen, and cooled gasses.

22. (Withdrawn) The workpiece holder of claim 19 wherein the base comprises a thermoelectric device to regulate the temperature.

23. (Withdrawn) The workpiece holder of claim 19 wherein the workpiece holder holds a workpiece comprising a solidified mass of bone and immobilization medium and where cooling of the workpiece holder is accomplished by packing a solid refrigerant such as dry ice, a phase-change material such as calcium chloride, or a cooled liquid refrigerant in a container around the workpiece or its base.

24. (Previously Presented) The method of claim 1, wherein the quantity of bone is at least partially demineralized.

25. (Currently Amended) A method of making bone particles which comprises: a) at least partially immersing one or more demineralized whole bones and/or demineralized whole bone sections in an immobilization medium; b) effecting a phase change of the immobilization medium to convert the immobilization medium to a solid state, thereby solidifying the immersed bone and its immobilization medium to provide a solidified mass of bone and immobilization medium; and, c) subdividing the solidified mass of bone and immobilization medium to provide subdivided particles of bone.